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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,275	01/28/2004	Francesco Braghiroli	66396-132	7581

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EXAMINER	
ALSOMIRI, ISAM A	
ART UNIT	**PAPER NUMBER**
3662	

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/765,275	BRAGHIROLI, FRANCESCO	
	Examiner	Art Unit	
	Isam Alsomiri	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *080504;012804;101105;*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Cullum et al. US006983656B2.

Referring to claim 1, Cullum teaches balancing a motor vehicle wheel (see figure 22), comprising the steps of: detecting relevant contour features of the wheel or the rim of the wheel (see figure 1[12]); accessing data related to contour features of a plurality of types of rim or wheel; comparing the detected contour features to the accessed contour features; and among the plurality of types of rim or wheel [14], determining a best matching rim or wheel based on a result of the comparing step [16]; and determining at least one balancing plane associated with the best matching rim or wheel [18].

Referring to claim 2, Cullum teach accessing information related to a result of an unbalance measurement; and determining an angular position and size of a balancing

weight based on the information related to the result of an unbalance measurement (see col. 9 lines 15-17).

Referring to claim 3, Cullum teaches the relevant contour features including rim flanges, flat surface portion of the rim, a rim surface extending in parallel relationship with the axis of the wheel, and a rim surface adjacent to the wheel disc portion or the wheel spokes (see col. 1 lines 35-37; col. 9 lines 8-9).

Referring to claim 4, Cullum teaches the step of detecting rim material, rim width, rim diameter and wheel diameter of the wheel, wherein: the accessing step further accesses data related to wheel features of a plurality of types of rim or wheel corresponding to the at least one detected features; and the comparing step further compares the at least one detected feature to the accessed data corresponding to the at least one detected features (see col. 10 lines 1-16; col. 7-8 Tables I & II).

Referring to claim 5, Cullum teaches the relevant contour features of the rim is determined by scanning the rim stepwise using an optical scanning measuring procedure (see col. 5 lines 29-34, 50-54)

Referring to claim 6, Cullum teaches altering the axial position of the at least one balancing plane on which an optical scanning beam of the scanning device is directed, for marking the altered axial position, wherein the angular position and the size of the balancing weight are calculated based on the altered axial position (see col. 10 lines 1-15).

Referring to claims 7-8, Cullum teaches data related to the detected contour features of the rim are stored with the axial position of the at least one associated

balancing plane (see col. 7-8, tables I, II); and the stored data are used for balancing vehicle wheels of other vehicles of the same or a similar type.

Referring to claim 9, Cullum teaches an apparatus for balancing a motor vehicle wheel including: a measuring shaft to which a motor vehicle wheel to be balanced is affixed (see figure 22); a measuring device for measuring forces resulting from an unbalance of the vehicle wheel (see col. 4 lines 60-63); an optical scanning device for obtaining geometrical data related to contour features of the rim or the vehicle wheel; and an evaluation device coupled to the scanning device and the measuring device (see col. 5 lines 50-54); wherein the evaluation device includes: memory in which contour features related to a plurality of types of rim or wheels and information related to balancing planes associated to the respective rim or wheel are stored; and a data processing device, coupled to the memory, is configured to perform the steps of: accessing the stored contour features; comparing the geographical data related to contour features of the rim or the vehicle wheel to the accessed contour features; and among the plurality of types of rim or wheel, determining a best matching rim or wheel based on a result of the comparing step; and determining at least one balancing plane associated with the best matching rim or wheel (see figure 1, col. 10 lines 1-15).

Referring to claim 10, Cullum teaches the data processing device is configured to further perform the steps of: ascertaining the axial position of the at least one balancing plane of the best matching rim or wheel; and calculating an angular position and a size of at least one balancing weight to be attached to the ascertained balancing plane (see col. 10 lines 1-15).

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Quinlan et al. US005189912A .

Referring to claim 1, Quinlan teaches balancing a motor vehicle wheel (see figure 9), comprising the steps of: detecting relevant contour features of the wheel or the rim of the wheel (see col. 7 lines 31-39); accessing data related to contour features of a plurality of types of rim or wheel; comparing the detected contour features to the accessed contour features; and among the plurality of types of rim or wheel; determining a best matching rim or wheel based on a result of the comparing step (see col. 6 lines 20-30); and determining at least one balancing plane associated with the best matching rim or wheel (see col. 6 lines 36-44)

Referring to claim 2, Quinlan teach accessing information related to a result of an unbalance measurement; and determining an angular position and size of a balancing weight based on the information related to the result of an unbalance measurement (see col. 6 lines 20-44).

Referring to claim 3, Quinlan teaches the relevant contour features including rim flanges, flat surface portion of the rim, a rim surface extending in parallel relationship with the axis of the wheel, and a rim surface adjacent to the wheel disc portion or the wheel spokes (see col. 6 lines 45-49).

Referring to claim 4, Quinlan teaches the step of detecting rim width, wherein: the accessing step further accesses data related to wheel features of a plurality of types of rim or wheel corresponding to the at least one detected features; and the comparing

step further compares the at least one detected feature to the accessed data corresponding to the at least one detected features (see col. 6 lines 45-49).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quinlan et al. US005189912A in view of Bux et al. US006122957A.

Referring to claim 5, Quinlan does not teach optically scanning the rim in stepwise. Bux teaches a similar system wherein the scanning/detecting device can be optical "stepwise" (see col. 4 lines 16-20, col. 3 lines 54-58). It would have been obvious to use optical measuring device for more accurate measurement.

Referring to claim 6, Quinlan teaches altering the axial position of the at least one balancing plane on which an optical scanning beam of the scanning device is directed, for marking the altered axial position, wherein the angular position and the size of the balancing weight are calculated based on the altered axial position (see col. 6 lines 36-44).

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quinlan et al. US005189912A in view of Douglas et al. US006484574B1.

Referring to claims 7-8, Quinlan is silent about teaching storing data related to the detected contour features of the rim with the axial position of the at least one associated balancing plane (see col. 7-8, tables I, II); and the stored data are used for balancing vehicle wheels of other vehicles of the same or a similar type. Douglas teaches a similar system including storing related data for balancing wheel of other vehicles of similar types (see col. 11 lines 27-32). It would have been obvious to modify Quinlan to include the last storing step of Douglas for faster and better balancing of similar wheels.

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quinlan et al. US005189912A in view of Bux et al. US006122957A and Douglas et al. US006484574B1.

Referring to claim 9, Quinlan teaches an apparatus for balancing a motor vehicle wheel including: a measuring shaft to which a motor vehicle wheel to be balanced is affixed (see figure 9); a device for obtaining geometrical data related to contour features of the rim or the vehicle wheel; and an evaluation device coupled to the scanning device and the measuring device (see figures 2 and 8); wherein the evaluation device includes: memory in which contour features related to a plurality of types of rim or wheels and information related to balancing planes associated to the respective rim or wheel are stored; and a data processing device, coupled to the memory, is configured to perform

the steps of: accessing the stored contour features; comparing the geographical data related to contour features of the rim or the vehicle wheel to the accessed contour features; and among the plurality of types of rim or wheel, determining a best matching rim or wheel based on a result of the comparing step; and determining at least one balancing plane associated with the best matching rim or wheel (see figure 3, col. 6 lines 19-44).

Quinlan does not teach a measuring device for measuring forces resulting from an unbalance of the vehicle wheel. Douglass teaches a similar system including measuring forces (see col. 7 lines 12-15). It would have been obvious to include the force transducers to determine the imbalance forces of the wheel, which is well known in the art. Further, Quinlan does not teach that the device for obtaining geometrical data is an "optical scanning device". Bux teaches a similar system wherein the scanning/detecting device can be optical or ultrasonic (see col. 4 lines 16-20). It would have been obvious to use optical measuring device for more accurate measurement.

Referring to claim 10, Quinlan teaches the data processing device is configured to further perform the steps of: ascertaining the axial position of the at least one balancing plane of the best matching rim or wheel; and calculating an angular position and a size of at least one balancing weight to be attached to the ascertained balancing plane (see col. 6 lines 36-44).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam Alsomiri whose telephone number is 571-272-6970. The examiner can normally be reached on Monday-Friday 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isam Alsomiri

March 16, 2006

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